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NUTRITION COMMITTEE NEWS

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DIETS OF CHILDREN

Children's diets have improved over the years with an improved economic situation and the advancement and spread of nutrition knowledge. But there is still "a long row to hoe" to reach the goal of a good diet for every child.

When children's diets fall short of recommended allowances they are likely to be low in calcium, ascorbic acid, and vitamin A more often than in other nutrients now generally measured. Diets can be increased in these nutrients by greater use of milk and dairy products, citrus fruit, tomatoes, and green and yellow vegetables.

Older children tend to have poorer diets than younger ones and girls poorer diets than boys, even when they are in the same family. Adolescent girls tend to fare worst of all. Children in families whose incomes are low are more likely than others to have inadequate meals.

Few studies of children's diets give the same degree of quantitative detail that many family dietary studies give. However, the inferences from many rapid surveys of children's dietary patterns plus the findings from more detailed quantitative information on children's food consumption give a fairly substantial background. Also, findings from studies of diets of children and families are consistent and reinforce each other.

This discussion of the adequacy of children's diets is based primarily on findings in studies cited in the list of Selected References (page 4). Some of the data are presented in charts (page 3).

At different ages

Children of elementary school age appear to have better diets on the average than teen-agers. Evidence of this comes from several studies.

In 1939-41, for example, 5- to 14-year-olds in Chicago families were found to follow better diet patterns than their older sisters and brothers (1). These elementary school children had more milk and more servings of fruit and vegetables and of meat, fish, poultry, and eggs.

Diets of 4th-graders in New York State in 1947 included relatively more protein for their ages than 10th-graders (2). The younger group had slightly more milk and also more fruits and vegetables high in ascorbic acid. (In most studies "milk" includes all dairy products except butter.)

Fairly recently in a scoring of the Sunday-through-Tuesday eating habits of nearly 30,000 school children, 5- to 8-year-olds had the highest total diet scores (3). Children 5-11 had more milk, green and yellow vegetables, and citrus fruit than those of 12-17 years.

In the chart, *Younger Children Fare Better*, data are drawn from studies made of selected groups in Tennessee, New York, and Maryland (8-12). The data indicate that 7- to 9-year-olds tend to have diets that provide calcium, ascorbic acid, and vitamin A value more adequately than do those of older children.

Even in far away Alaska children under 10 had relatively better food habits than older children (14). In four Eskimo villages younger children, because of higher consumption of milk, fared better in calcium. The diets of those under 10 generally furnished recommended protein allowances while those of 10- to 12-year-olds and girls over 13 usually fell short in this nutrient.

This Issue

Nutrition Committee News for July 1951 told of dietary progress in the United States in the past decade in national food supplies and family diets. This July attention is turned to children's diets. Facts on the adequacy of their diets are presented for the information of youth and adult groups that are following up the recommendations of the Midcentury White House Conference on Children and Youth and of others interested in improving the nutrition of young people.

College students often have better diets than those in high school. However, where there is need for improvement in the diets of either group it is usually in the same nutrients—calcium, ascorbic acid, and vitamin A (15-16). College students who eat in supervised dining halls with adequate food available seem to have better diets more often than those whose living arrangements allow them to select their own food (17-18). Some still fail to be well fed, however, even when a good diet is offered. For example, not all were equally well nourished among a small group of girls, students in home economics, living in a cooperative dormitory where the group diet was fairly good (19). Poor food habits kept a few from taking advantage of the good food served.

Boys vs. girls

During adolescence, boys are likely to eat more and get better diets than girls. Boys tend to eat heartily, whereas many girls perhaps distressed at their rapid changes in girth and shape try to become thin by cutting down on their food.

Dietary differences may start earlier than is usually suspected. In most studies diets have been analyzed separately by sex beginning at age 13. However, in Groton Township, New York, 1-day food records of family members were analyzed separately by sex and age groups starting at 1 to 3 years (20). Comparison of the average value of their diets with recommended allowances for calories and eight nutrients indicated that at every age level except perhaps 1-3, boys receive better diets than their sisters. Divergence widened at the 13-15 year period for calories, protein, calcium, and ascorbic acid and at a somewhat earlier period for most of the other nutrients.

The 16- to 20-year-old girls made the poorest showing in the Alaska Study (14).

In New York State, adolescent boys drank more milk and in general made better food selections than girls (2). Their better milk consumption is illustrated in the chart, *Boys Drink More Milk*.

The Chart, *More Milk Means More Calcium*, points up his well-known relationship. All children in the Maryland study who had four or more cups of milk a day had diets that met calcium recommendations (12).

In Tennessee, boys over 13 had diets higher in protein, calcium, vitamin A, and ascorbic acid than girls of that age (5-10). Again in New York State at age 13-15,

boys' diets met dietary allowances more frequently than those of girls (11). The chart, *Boys Get More Calcium*, shows this for one nutrient.

Dietary differences persist into later adolescence. At Oregon State College first-year men had better-rated diets than first-year women (21).

In high vs. low economic family groups

The adequacy of the kind and quantity of food children receive is often determined by family incomes. In Maryland, children in families with monthly incomes of \$250 or more had higher-rated diets than those in families with lower incomes, when diets were graded by the nutrient meeting dietary allowances least well (12).

Child's share of the family's diet

Up to this point children's diets have been reviewed without reference to those of their families. But obviously what is served at home may limit the amount and quality of the food children select.

In a Cumberland, Md., school, shortages in diets of 3rd- to 6th-graders were in the same nutrients as in diets of their families (12). Diets of both groups needed improvement in calcium, vitamin A, and ascorbic acid. About one-half of the children had diets of the same nutritive quality as their families, but one-fourth had poorer diets and another one-fourth had better diets, when diets were rated by the least satisfactory nutrient. The diets of the children generally included more calcium, indicating that they got proportionately more milk than other family members. In most other nutrients, the reverse was true.

How to order charts

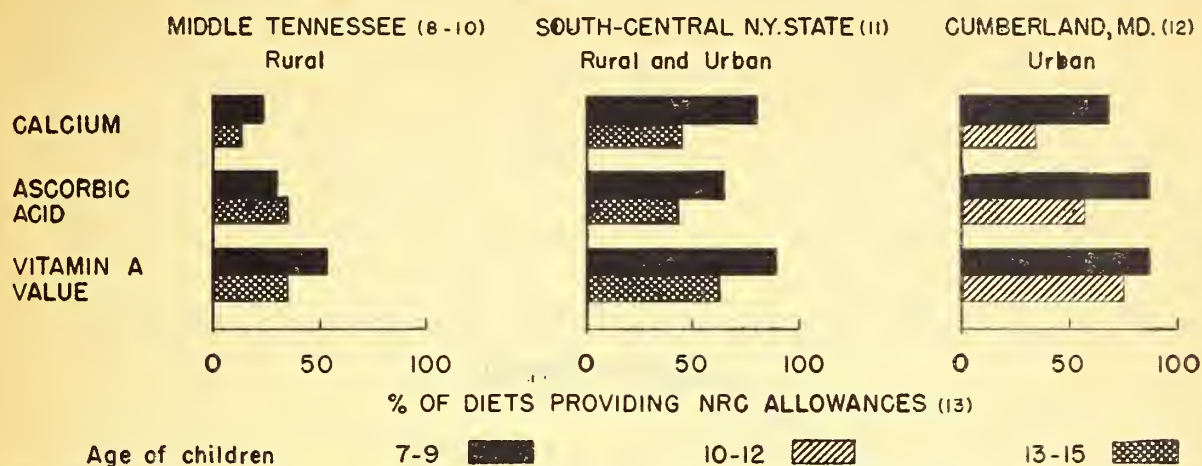
Photographic prints of charts on page 3 may be had at cost of:

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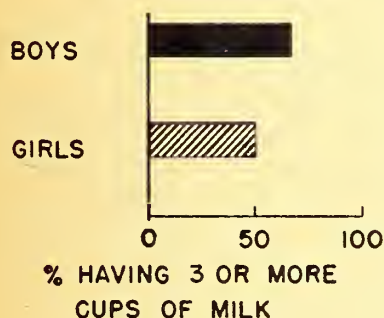
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YOUNGER CHILDREN FARE BETTER



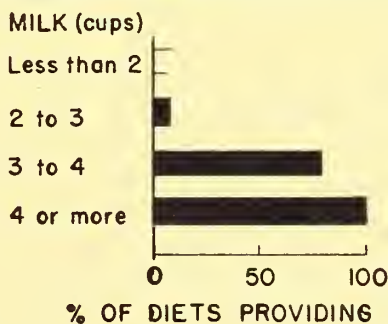
BOYS DRINK MORE MILK

10th grade pupils in up-State N.Y. (2)



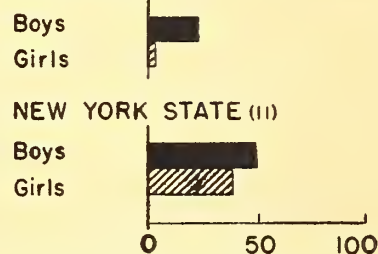
MORE MILK MEANS MORE CALCIUM

Children in Cumberland, Md. (12)



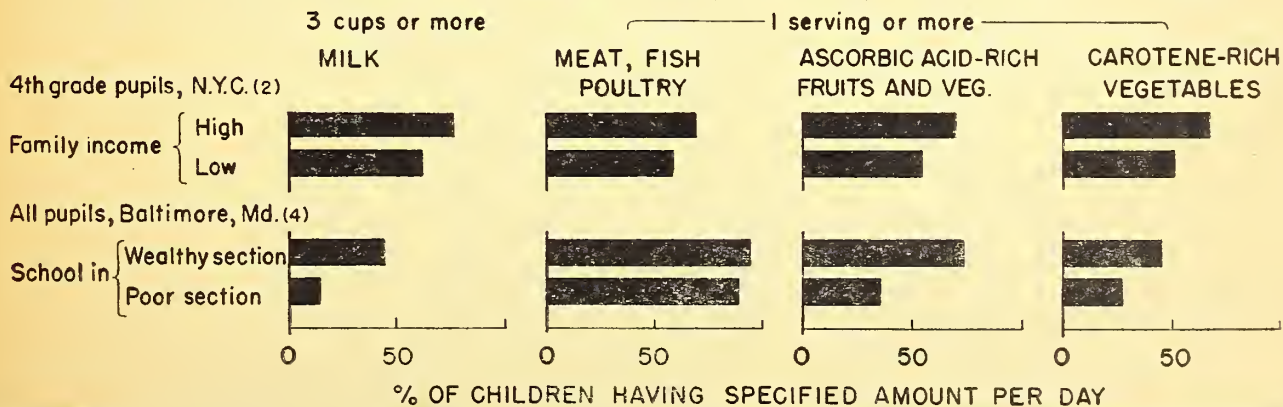
BOYS GET MORE CALCIUM

13-to 15-year-olds in areas in: TENNESSEE (8)



HIGHER FAMILY INCOMES

GIVE CHILDREN MORE MILK, MEAT, FRUIT, AND VEGETABLES



Toward better diets for youth

This review of dietary studies during the past decade or so indicates that diets of youths tend to be poorer at high school age than at any earlier age and that during adolescence girls fare less well than boys.

As the authors of one report have suggested, adolescent girls need direction in selecting meals which would provide them with the right food, permit them to have in-between snacks with friends, and keep their weight

from going out of bounds (22). Many boys would profit from such help.

These findings are a challenge to help youth itself. Youth leading youth, probably better than others, could put a finger on why some boys and girls eat more poorly as they grow up.

The staff of Nutrition Committee News will welcome details about plans and accomplishments of groups concerned with improving the diets of children and youth. Accounts of successful projects in Nutrition Committee News will help others.

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